Recognition, June 1999, pp. 213 - 218), Kim et al. (U.S. Patent No. 6,175,592), and/or Rosman et al. (U.S. Patent No. 6,222,550). Applicants respectfully submit that these claim rejections are in error.

Vetro et al. discloses techniques for down conversion for use in a down conversion decoder, and motion compensation schemes that are dependent upon the particular technique of down conversion that is used. In pertinent part, Vetro et al. teaches different processing schemes that involve down conversion and motion compensation. Significantly, as is acknowledged by the Examiner at page 4 of the Final Office Action, Vetro et al. does not disclose or suggest "performing motion compensation for the downsampled image in the spatial domain, the performing of the motion compensation comprising scaling motion vectors in accordance with a downsampling ratio," as is required in Applicants' independent claims (See, independent claims 1, 16, 28, and 32).

Ng discloses that 8 by 8 blocks of data from VRAM are decimated by a decimator down to 4 by 4 blocks, and these 4 by 4 blocks are supplied to an adder in accordance with the data format of inverse transform image data applied to the adder from another decimator. (See, Ng, column 6, line 65 to column 6, line 7; See also, Ng's Figure 5).[1]

Also in Ng, a motion compensated predictor receives "motion vectors" (as the term "motion vectors" is defined and used in Ng) and accesses blocks of pixel data at addresses in VRAM identified by such "motion vectors." See, e.g., Ng, column 3, line 64 to column 4, line 18, column 5, lines 38 to 64). As defined and used in Ng:

> Motion vectors . . . are codewords which identify 8 by 8 blocks of pixels in frames from which predicted frames are generated, which blocks most closely match the block currently being processed in the frame currently being encoded. (Ng, column 4, lines 34-39).

[1] In both the Final and previous Office Actions, the Examiner has asserted that Ng "inherently" discloses an article comprising a storage medium having stored thereon instructions of the type described in claims 28 and 32, because "the controller 302, as a state machine, is inherently [deemed] to have a storage medium storing the program (instructions) executed by a platform because of the programming routines." (Final Office Action, page 7). In Applicants' previous Amendment, Applicants respectfully traversed these assertions, and based upon MPEP 2112, and requested that the Examiner either withdraw these assertions or provide evidence (e.g., via personal affidavit or prior art reference) to prove that the subject matter asserted by the Examiner to be inherently disclosed in Ng necessarily must be present in Ng's disclosed arrangement. The Examiner has provided no such evidence. Once again, pursuant to MPEP 2112, Applicants respectfully traverse these assertions by the Examiner, and request that the Examiner provide such evidence or withdraw these assertions.

As the Examiner is well aware, in giving Applicants' claim language its broadest reasonable interpretation, the Examiner is bound to construe the term "motion vectors" in Applicants' claims in a manner that is consistent with the definition and use of this term in the Specification. MPEP 2106 II.C. In contrast to the manner in which the term "motion vectors" is defined and used in Ng, as defined and used in the Specification, "a motion vector of a processed macroblock specifies the relative distance of reference data from the processed macroblock." (Specification, page 9, lines 3-6). Given this fundamental difference between Applicants' claims and Ng's disclosure, it simply cannot be said that Ng discloses or suggests the aforesaid features of the claimed invention that are missing from Vetro et al., namely, "performing motion compensation for the downsampled image in the spatial domain, the performing of the motion compensation comprising scaling motion vectors in accordance with a downsampling ratio," as the term "motion vector" is defined and used in the Specification. (See independent claims 1, 16, 28, and 32).

It is not seen that Dugad et al., Kim et al., and/or Rosman et al. overcome these deficiencies of Vetro et al. and Ng so as to suggest, when taken in combination with Vetro et al. and Ng, Applicants' claimed invention. Dugad et al. is cited by the Examiner as disclosing the use of a bilinear interpolation scheme for downsampling. Kim et al. is cited by the Examiner as disclosing the display of a downsampled spatial image such that the resulting non-uniform vertical spacing of data signal lines appear substantially uniform on a low resolution monitor screen, and Rosman et al. is cited by the Examiner as disclosing use of a 3D pipeline to perform bilinear interpolation. Even assuming, *arguendo*, that Dugad et al., Kim et al., and Rosman et al. disclose these features in the manner cited by the Examiner, none of these references can be said to supply the aforesaid features of Applicants' claimed invention that are missing from Vetro et al. and Ng.

Thus, it is respectfully submitted that no combination of Vetro et al., Ng, Dugad et al., Kim et al. and Rosman et al. renders obvious the claims. Thus, it is respectfully submitted that

the Examiner's rejections of combinations of claims 1-9, 11-21, and 23-34 under 35 USC 103 as being rendered obvious by various combinations of Vetro et al., Ng, Dugad et al., Kim et al., and Rosman et al. are in error.

Quite apart from the foregoing, neither the Final Office Action nor the previous Office Action contain any acknowledgement from the Examiner that the Examiner has considered the references cited in the Information Disclosure Statement that was mailed by Applicants on September 7, 2001 to the United States Patent & Trademark Office. Applicants respectfully request that the Examiner consider and make of record these references in the Examiner's next communication to Applicants.

In the event that the Examiner deems personal contact desirable in further disposition of this case, the Examiner is invited to call the undersigned attorney at 781-687-1730.

Please charge any shortages and credit any overcharges to Deposit Account number 02-2666.

Respectfully submitted,

Date: 22 July 2002

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